

WHAT IS CLAIMED IS:

1 (currently amended). An apparatus for use in analyzing video
2 images, comprising:

3 a video input signal ~~input for~~ providing a video signal to be analyzed,
4 the video input signal including at least one of successive picture frames and
5 fields **containing a video picture**;

6 a video processor ~~coupled to at least one display device and~~ operable
7 to produce a display of information at least partly from the video input signal;

8 a controller coupled to the video processor and to at least one control
9 input, the controller being operable to control ~~a nature of~~ the information
10 displayed by the video processor;

11 wherein the video processor is operable to produce **a formatted**
12 **display of** selectable data images for presentation on ~~a the~~ display device
13 **wherein the formatted display comprises a selection of one of:**
14 ~~comprising:~~

15 a **full** representation of the **video picture contained in the full**
16 ~~said video input signal to be analyzed, wherein the full said video~~
17 ~~signal is~~ selectively presented so as to occupy at least a portion of a
18 display area of the **formatted** display ~~device~~;

19 a zoom image including an area of particular scrutiny in said
20 video **picture** ~~signal to be analyzed, said area of particular scrutiny~~
21 ~~occupying a selected part of the video signal and being~~ selectively
22 presented **so as to occupy at least a portion of the display area of**
23 **the formatted display**; ~~and,~~

24 a report of video data characteristics **of** at least ~~at~~ one point
25 within said ~~limited~~ area **of particular scrutiny**;

26 **a subset of said full representation, said zoom image and**
27 **said report; and,**

28 ~~and,~~ wherein the video processor is operable to change the area of
29 particular scrutiny so as to select for video data characteristics meeting
30 predetermined criteria ~~selectably to present on the display device a subset of~~
31 ~~the selectable data images.~~

1 2(original). The apparatus of claim 1, wherein the video processor
2 has a plurality of display modes in which at least two of the selectable data
3 images depict the area of particular scrutiny.

1 3(currently amended). The apparatus of claim 2, wherein the video
2 processor has a display mode wherein the full representation of the video
3 picture image, the zoom image and the report of said video data
4 characteristics are presented at different parts of the display device ~~that~~ and
5 present progressively smaller parts of the ~~full video signal at the~~ area of
6 particular scrutiny.

1 4(original). The apparatus of claim 3, wherein the report includes a
2 tabular display of data respecting pixels at the area of particular scrutiny.

1 5(original). The apparatus of claim 4, wherein the tabular display of
2 data includes sample location information and color sample data.

1 6(original). The apparatus of claim 5, wherein the tabular display of
2 data includes a color swatch demonstrating the color sample data.

1 7(currently amended). The apparatus of claim 1, wherein the video
2 input signal contains ~~is adapted for processing~~ a digital video signal with
3 successive picture frames and the video processor produces the
4 formatted display repetitively for ~~in~~ increments of at least one frame, from
5 ~~the frame containing~~ one of discrete sample data and discrete color state
6 elements defining pixels in the video input signal.

8(currently amended). The apparatus of claim 1, ~~further comprising~~
~~a video sampler operable to produce a digital video signal~~ **wherein the video**
processor produces the formatted display for ~~in~~ increments of at least one
frame **from** ~~the frame containing~~ one of discrete sample data and discrete
color state elements defining pixels **in the video input signal**.

9(currently amended). The apparatus of claim 1, wherein the video
processor **is operable to resize at least part of the video picture for**
presentation in part of an area of the formatted display that occupies
less than a full area of the formatted display, and wherein resizing by the
video processor includes ~~comprises a resizing engine operable to present~~
~~the input video signal on said part of the area of the display device, the~~
~~resizing engine being operable for~~ at least one of recalculating pixel values,
sampling pixel values and reading out selected pixel values, ~~so as to produce~~
~~an image in a display area which image occupies less than a full area of the~~
~~display device.~~

10(currently amended). The apparatus of claim 1, wherein the
control input is operable by a user manually to select from the ~~input video~~
input signal an area **to be the area** of particular scrutiny, and wherein the
video processor is operable simultaneously to present the **video picture and**
the zoom image including the area of particular scrutiny, in different
areas of said formatted display ~~input video signal on said part of the area of~~
~~the display device, and a zoom image of the area of particular scrutiny on the~~
~~first supplemental display area.~~

11(currently amended). The apparatus of claim 1, wherein the
~~selectable data images are presented in at predetermined areas of the display~~
~~device providing a first display area and at least one supplemental display~~
~~area, and wherein the video processor allots~~ **the formatted display to**

5 accommodate said selection ~~said predetermined areas to said selectable~~
6 ~~data images responsive to at least one of user input selections and data~~
7 ~~values in the video signal.~~

1 12(currently amended). The apparatus of claim 1, wherein the video
2 processor is operable responsive to the control input to define a selection
3 criteria and automatically to select from the video input ~~video~~ signal at least
4 one said area of particular scrutiny based upon data in the video input signal
5 meeting said selection criteria.

1 13(currently amended). The apparatus of claim 12, further wherein
2 the controller and the video processor or are operable to coordinate between
3 automatic and manual selection of the area of ~~for~~ particular scrutiny, wherein
4 said manual selection supersedes ~~supercedes~~ automatic selection at least for
5 a limited period of time.

1 14(original). The apparatus of claim 13, wherein the selection criteria
2 for said automatic selection include a color gamut value criterion having at
3 least one threshold value such that a value meeting the threshold value
4 criterion is selected for particular scrutiny.

Claims 15-17 are cancelled.

1 18(currently amended). A multi-format monitor for video signal
2 analysis comprising video signal analysis and processing apparatus operable
3 to compose a formatted display signal that ~~can controllably contain~~
4 selectively comprises a subset of areas presenting:
5 a full ~~visual~~ presentation of a video picture contained in a ~~the video~~
6 input signal ~~in one of said display areas of~~ , selectively placed in an area
7 less than a full area of the formatted display, said visual presentation
8 selectively ~~selectably~~ including at least one cursor identifying in the video

picture on the formatted display an area of particular scrutiny ~~a limited part of the visual presentation~~ containing at least one pixel defined by one of a sample value and a discrete minimum size zone,

~~an area~~ a zoom image in which ~~a said limited part~~ of the video picture is placed in an areas less than the full area of the formatted display, wherein the zoom image selectively corresponds to the area of particular scrutiny ~~is zoomed in size to show a local area including and surrounding the pixel;~~ and,

a pixel information area ~~data zoom~~ containing a numerical analysis applied to ~~the~~ at least one said pixel identified by the cursor;

wherein the processing apparatus is operable to change at least one of a position of the cursor, the area of particular scrutiny and the numerical analysis responsive to at least one of a user input and an automatic selection criteria ~~to map into the display signal portions containing one, two or each of said full visual presentation, said area zoom and said pixel data zoom.~~

19(currently amended). The multi-format monitor of claim 18, wherein the ~~further comprising: a video~~ input signal contains ~~input for providing a video signal to be analyzed, the video signal including at least one of successive picture frames and fields~~ with changing pixel values; further comprising a video processor coupled to a display device for presenting said formatted display ~~and operable to produce a display of information at least partly from the video input signal for said display areas;~~ and, a controller coupled to the video processor and to at least one control input, wherein the controller is operable responsive to the control input to apply a selection criteria for at least temporarily changing said position of the cursor, said area of particular scrutiny and said numerical analysis to encompass at least one of said pixel values based on the selection criteria ~~a user input to control selection of information displayed by the video processor, and said~~

~~selection selectively includes manual selection of a position of the cursor, and automatic selection of the position of the cursor, based upon user selection criteria.~~

20(currently amended). A method for presenting **changing** video information **of a video picture contained in a video input signal** for analysis, ~~the~~ **of a video** **input** signal **being** represented by one of stored video data and presently processed video data, comprising:

providing a multi-format display having a display **device with a display** area;

selectively displaying the video ~~signal as a complete picture~~ **in a formatted display occupying** at least in part of the display area, and providing a cursor for identifying a position in the **video** picture;

selectively enlarging and selectively displaying **in the formatted display an area of particular scrutiny in the video** ~~at least in part of the display area a portion of the picture representing a limited area at and around the position identified by the cursor, thereby forming a picture image zoom that is selectively presented in said part of the display area, said limited area being substantially enlarged compared to a corresponding area in the complete picture;~~

numerically representing **pixel information for** at least one pixel associated with the cursor ~~by at least one data value associated with one of a position and an appearance of said at least one pixel, and selectively displaying a tabular presentation of the data values at least in part of the display area;~~

selectively controlling, both manually and automatically, at least one of the position of the cursor and a content of the formatted display, for at least temporarily directing the formatted display to a different area of particular scrutiny determined according to a selection criterion.

Claims 21-25 are cancelled.